International Journal of Educational Science and Research (IJESR)
ISSN(P): 2249-6947; ISSN(E): 2249-8052
Vol. 4, Issue 4, Aug 2014, 1-8
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INFLUENCE OF EXERCISES ON PERFORMANCE AND SKILLS OF KORFBALL LEARNER

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ABSTRACT

The purpose of this investigation was to clarify the influence of selected exercise on accuracy of long range shoot, penalty shoot and running shoot abilities of korfball players. 40 male Korfball players served as subjects in this study (age: 10---14 years, height: 153-155cm, weight: 45-50 kg). The subjects were selected by using random sampling method from Bilaspur University and affiliated colleges. All the subjects were divided into two groups of control and experimental consisting of 20 subjects.Each. Long range shooting, penalty shooting and running shooting were being selected for the knowing effects of selected exercises. For the present study pre-test and post-test randomized group design which consisted of experimental group was used. The data was collected before and after eight weeks of training to experimental group. The training pack consisted medicine ball throw, handball holding, pull-ups, ball throw to the wall with different load parameters. The training schedule consists warming up, training loading and cooling down sessions. The testing protocol for each subject involved a subject- controlled warm-up period and an accuracy test of three free throw trials from various zone. Statistical tool t-test was used to assess the statistics difference. The significant level was set to α=.05. The result showed that there was significant effect on long range shooting, penalty shooting and running shooting abilities of korfball players. Based on the results from this study, coaches could strengthen the training for Korfball players to improve shooting abilities.

KEYWORDS: Korfball, Penalty Shooting and Training Load

INTRODUCTION

In 1902 Nico Broekhuysen, a Dutch school teacher from Amsterdam, was sent to Naas, a town in Sweden, to follow an educational course about teaching gymnastics to children. This is where he was introduced to the Swedish game 'ringbolt'. He replaced the ring with a basket (for which the Dutch word is "korf" or "mand"), so it was easier to see if a player had scored or not. Broek huysen also simplified the rules so children could also understand and play it, Korfball was born. The main idea was the same as ring boll, but it now stood on its own.

A korfball team consists of eight players, four female and four male. Every team has their own coach, who can switch players during a match, negotiate with the referee, create the formation for the match and keep up the team's spirit. A korfball match consists of two periods of 30 minutes, with a break of 10 minutes in between periods. Two men and two women of each team are in one zone, and the others are in the other zone. During the match they cannot switch zones. Men and women play side-by-side, but duals are man to man and woman to woman. However, it is allowed for a player to switch among opponents whom he/she is defending, as long as they are of the same gender.

It is generally found that every korfball player uses accuracy of long range shoot, penalty shoot and running shoot for scoring more points and thus winning the game. Shoenfelt (1991), conducted the study on Immediate effect of weight training as compared to aerobic exercise on free throw shooting in collegiate basketball players and found its influence free throw shooting abilities." Woolstenhulme (2004), conducted the study on. "Vertical jump, anaerobic power, and shooting accuracy are altered after 6 hours strength training in collegiate women basketball players, likewise, in the current study, we assumed that selected exercises substantial influence on the accuracy of long range shoot, penalty shoot and running shooting performance of korfball. In this study, we aimed to extract the effect of selected exercises on accuracy of long range shoot, penalty shoot and running shoot ability in korfball."

HYPOTHESIS

It is hypothesized that the study of selected exercises on accuracy of long range shoot, penalty shoot, and running shoot ability in korfball will be significant differences. This hypothesis is based on the researchers own experience.

METHODOLOGY

40 male Korfball players served as subjects in this study(age: 10-14 years, height: 153-155cm, weight: 45-50 kg). The subjects were selected by using random sampling method from Bilaspur University and affiliated colleges. All the subjects were divided into two groups of control and experimental group consisting of 20 subjects each. Long range shooting, penalty shooting and running shooting were being selected for the knowing effects of selected exercises. All the subject will were divided into two groups of Control and Experimental group consisting of 20 subjects each. Long Range Shoot, Penalty Shoot and Running shoot Korfball skills were be selected for the study. For the present study pre-test and post-test randomized group design which consists of experimental group was used. The data was collected before and after eight weeks of training. The Training Pack consisted Medicine Ball Throw, Handball Holding, Pull-Ups, Ball Throw to the Wall with variation in load parameters. The training schedule consists warming up, training and cooling down sessions. The training schedule was implemented only up to one and a half month.

Criterion Measures

The researcher was conducting self-made test with concerned of national Korfball Coach for knowing the long range shoot, penalty shoot and running shoot test.

Administration of Test

Long Range Shooting Test

Purpose: To measure the shooting ability of korfball players.

Procedure: For the collection of data in a precise manner, the subjects will give full demonstration about the conductance of test. The tester will draw a line on the ground 6 mts. apart from the pole of three different positions. i.e. straight from the pole. From left side at an angle of 45o and from right side at an angle of 45o then the subject will be asked to shooting for 15 times at different positions.

Score: The successful shoots was considered as score of the subject.

- **Penalty Shooting Test**

Purpose: This test used to know the accuracy in shooting ability of korfball players.

Procedure: For the collection of data in a precise manner, the subjects will give full demonstration about the conductance of test. The tester will draw a line on the ground 2.5 m apart from the pole at three different positions i.e. straight from the pole. From left side at an angle of 45 degree and from right side at an angle of 45 degree then the subject will be asked to do shooting for 15 times at different positions.

Score: The successful shoots was considered as score of the subject.

- **Running Shooting Test**

Procedure: The subject will be asked by the tester to perform running shoot at a distance of 10 mts. from the pole and the subject will be also asked to perform running shoot at an angle of 45o from both sides. The subject will be given 15 attempts from all three positions to perform the skills.

Score: The successful shoots was considered as score of the subject.

RESULTS

The data collected on 40 male subjects before and after eight week training program on long range shoot, penalty shoot and running shoot was analysed by comparing the means of pre and post-test of control and experimental groups and also statistically analysed by applying‘t’test to check the significant difference among selected variables. To test the hypothesis the level of significance was set at 0.05 level of confidence which was considered adequate and reliable for the purpose of this study. The result are presented in tables, graphs,

Table 1: Comparison of Long Range Shooting between Pre and Post Test of Control Group

Groups	Test	Mean	S. D.	M. D.	D. F.	‘t’ Value	T. T.
Control Group	Pre Test	17.45	4.97	0.05	19	0.021	1.729 *
	Post Test	17.4	4.80				
Experimental Group	Pre Test	17.95	5.23	8.56	19	5.52	1.729 **
	Post Test	26.6	4.58				
Control Group	PostTest	8.4	5.18	8.2	38	5.57	2.02* **
Experimental Group	Post Test	26.6	3.21	7.2			

*Level of significance = 0.05, Tabulated‘t’0.05 (19) =1.729

**Level of significance = 0.05, Tabulated‘t’0.05 (19) =1.729

***Level of significance = 0.05, Tabulated‘t’0.05 (38) =2.02

Table 1 reveals that there is no significant difference between means of pre and post- test of control group, because mean of pre- test is 17.45 is greater than mean of post- test is 17.4, and there mean difference is 0.05. Before applying‘t’ test, standard deviation was calculated between pre-test where S.D. =4.97 and post-test where S.D. =4.80. There was not a significant difference between pre and post-test of control group because value of calculated ‘t’ =0.021 which is less than tabulated ‘t’ =1.729 at 0.05 level of significance, which shows no improvement was found in control group because no training was given to the subjects of control group.

There is significant difference between means of pre and post- test of experimental group, because mean of pre- test is 17.95 is less than mean of post- test is 26.6, and there mean difference is 8.65, To check the significant difference between pre and post- test of experimental group the data was again analysed by applying ‘t’ test.

Before applying 't' test, standard deviation was calculated between pre-test where S.D. =5.23 and post-test where S.D. =4.58 There was a big significant difference between pre and post-test of experimental group because value of calculated 't' =5.55 which is more than tabulated 't' =2.02 at 0.05 level of significance, which shows improvement was found in experimental group because training was given to the subjects of experimental group.

There is a significant difference between means of post-test of control and experimental group, because mean of post-test of control group is 18.4 is less than mean of post-test of experimental group is 26.6, and there mean difference is 8.2, To check the significant difference between post-test of control and experimental group the data was again analysed by applying 't' test. Before applying 't' test, standard deviation was calculated between post-test where S.D. (control group) =5.18 and S.D. of (experimental group) =3.21 There was a significant difference between post-test of control and experimental group because value of calculated 't' =5.57 which is more than tabulated 't' =2.02 at 0.05 level of significance, which shows improvement was found in experimental group because training was given to the subjects of experimental group.

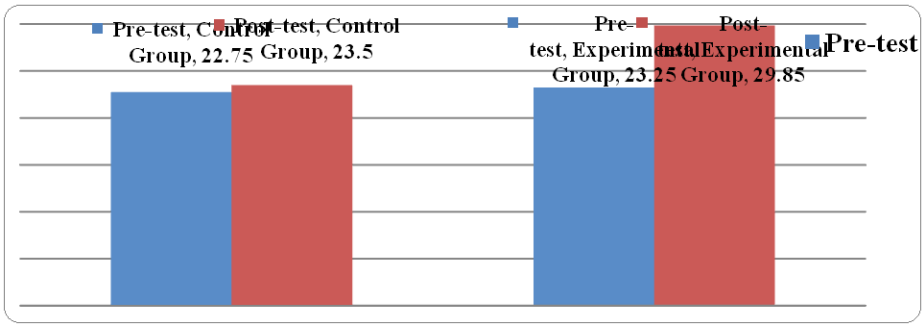


Figure 1: Graphical Representation of Mean Difference between Pre and Post- Test of CONTROL and Experimental Group for Long Range Shoot

Table 2: Comparison of Penalty Shooting between Pre and Post- Test of Control Group

Groups	Tests	Mean	S. D.	M. D.	D. F.	't' Value	T. T.
Control Group	Pre Test	25.2	5.65	0.1	19	0.029	1.729 *
	Post Test	25.3	5.70				
Experimental Groups	Pre Test	25.9	5.3	4.15	19	2.57	1.729 **
	Post Test	30.05	4.91				
Control Groups	Post Test	25.3	5.70.				25.3* **
Exprimental Groups	Post Test	30.05					

*Level of significance = 0.05, Tabulated 't'0.05 (19) =1.729

**Level of significance = 0.05, Tabulated't'0.05 (19) =1.729

***Level of significance = 0.05, Tabulated 't'0.05 (38) =2..02

Table 2 reveals that there is no significant difference between means of pre and post- test of control group, because mean of pre- test is 25.2 is slightly less than mean of post- test is 25.3, and there mean difference is 0.1. To check the significant difference between pre and post- test of control group the data was again analysed by applying't' test. Before applying't' test, standard deviation was calculated between pre- test where S.D. =5.65 and post- test where S.D. =5.70 There was no significant difference between pre and post- test of control group because value of calculated 't'

=0.029 which is less than tabulated 't' =1.729 at 0.05 level of significance, which shows no improvement was found in penalty shoot of control group because no training was given to the subjects of control group.

There was also significant difference between means of pre and post- test of experimental group, because mean of pre -test is 25.9 is less than mean of post -test is 30.05, and there mean difference is 4.15, To check the significant difference between pre and post- test of experimental group the data was again analysed by applying't' test. Before applying't' test, standard deviation was calculated between pre- test where S.D. =5.3 and post- test where S.D. =4.91= 2.6. There was significant difference between pre and post- test of experimental group because value of calculated 't' =2.57 which is more than tabulated 't' =2.02 at 0.05 level of significance, which shows improvement was found in post-test of experimental group because training was given to the subjects of experimental group.

There is significant difference between means of post- test of control and experimental group, because mean of post-test of control group is 25.3 is less than mean of post-test of experimental group is 30.05, and there mean difference is 4.75, To check the significant difference between post- test of control and experimental group the data was again analysed by applying't' test. Before applying 't' test, standard deviation was calculated between post- test where S.D. (control group) =5.70 and S.D. of (experimental group) =4.91 There was significant difference between post-test of control and experimental group because value of calculated 't' =2.84 which is more than tabulated 't' =2.02 at 0.05 level of significance, which shows improvement was found in experimental group due to six week training and no improvement in penalty shoot was found in control group.

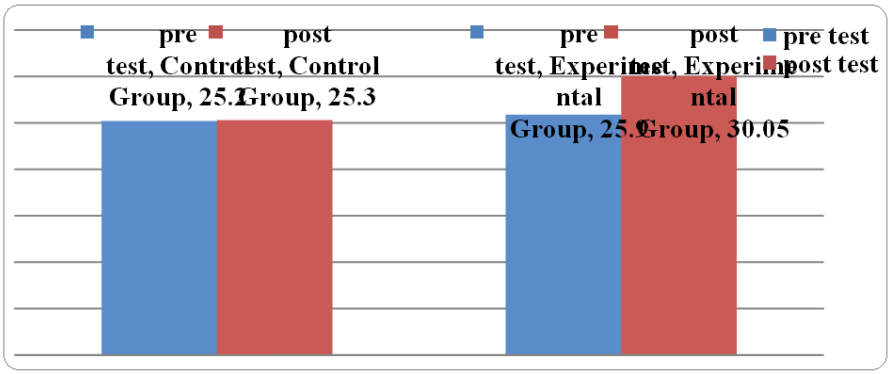


Figure 2: Graphical Representation of Mean Difference between Pre and Post - Test of Control and Experimental Group for Penalty Shooting

Table 3. Comparison of Running Shoot between Pre and Post- Test of Control Group

Groups	Tests	Mean	S. D.	M. D.	D.F.	O. T.	T. T.
Control Group	Pre Test	22.75	4.30	0.75	19	0.317	1.7298*
	Post Test	23.5	4.34				
Experimental Group	Pre Test	23.25	3.93	6.6	19	0.137	1.729**
	Post Test	29.85	3.21				
Control Group	Post Test	23.5	4.34	6.35	38	5.29	2.02***
Experimental Group	Post Test	29.85	3.21				

*Level of significance = 0.05, Tabulated't'0.05 (19) =1.729

**Level of significance = 0.05, Tabulated't'0.05 (19) =1.729

***Level of significance = 0.05,Tabulated 't'0.05 (38) =2.02

Table 3 reveals that there is no significant difference between means of pre and post- test of control group, because mean of pre- test is 22.75 is less than mean of post- test is 23.5, and there mean difference is 0.75. To check the significant difference between pre and post- test of control group the data was again analysed by applying‘t’ test. Before applying‘t’ test, standard deviation was calculated between pre- test where S.D. =4.30 and post- test where S.D. =4.34 There was not a significant difference between pre and post- test of control group because value of calculated‘t’ =0.317 which is less than tabulated‘t’ =1.729 at 0.05 level of significance, which shows no improvement was found in control group. because no training was given to the subjects of control group.

There was significant difference between means of pre and post- test of experimental group, because mean of pre- test is 23.25 is less than mean of post- test is 29.85, and there mean difference is 6.6, To check the significant difference between pre and post- test of experimental group the data was again analysed by applying‘t’ test. Before applying‘t’ test, standard deviation was calculated between pre- test where S.D. =3.93 and post- test where S.D. =3.21 = 1.28. There was significant difference between pre and post -test of experimental group because value of calculated ‘t’ =5.84 which is more than tabulated ‘t’ =2.02 at 0.05 level of significance, which shows improvement was found in post- test of experimental group because training was given to the subjects of experimental group.

The result was also showed significant difference between means of post- test of control and experimental group, because mean of post- test of control group is 23.5 is less than mean of post- test of experimental group is 29.85, and there mean difference is 6.35, To check the significant difference between post- test of control and experimental group the data was again analysed by applying‘t’ test. Before applying‘t’ test, standard deviation was calculated between post- test where S.D. (control group) =4.34 and S.D. of (experimental group) =3.21 There was significant difference between post- test of control and experimental group because value of calculated ‘t’ =5.29 which is more than tabulated ‘t’ =2.02 at 0.05 level of significance, which shows improvement was found in experimental group due to eight week training and no improvement in running shoot was found in control group.

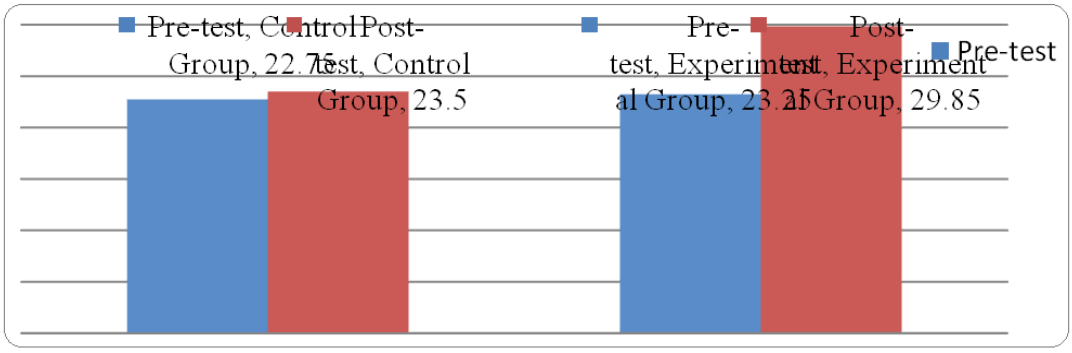


Figure 3 : Graphical Representation of Mean Difference between Pre and Post Test of Control and Experimental Group for Running Shoot

DISCUSSIONS ON FINDINGS

It has been observed from the analysis of data that there is significant difference between the same variables among the groups after the administration of training programme. The results showed that there is significant improvement within and among the groups. Hence training program of eight weeks is adequate for Long range shoot, Penalty shoot and Running shoot ability.

JUSTIFICATION OF HYPOTHESIS

It was hypothesized there will be significant effect of training on selected Physical variables. After a long period of training, the study showed significant effect on Long range soot, Penalty shoot, and Running shoot. Therefore hypothesis is accepted.

CONCLUSIONS

The result showed that there was significant effect on long range shooting, penalty shooting and running shooting abilities of korfball players. Based on the results from this study, coaches could strengthen the training for Korfball players to improve shooting abilities.

RECOMMENDATIONS

In the light of results obtained and conclusions drawn, the following recommendations were made for future investigations and for practical applications. These are:

- This study may be repeated to physiological variables on the same subjects.
- The same study may be constructed with longer duration of training programme.
- The similar study may be repeated on the female subjects.
- The same study may be repeated on the other class of the society for different age groups.
- Coaches and physical education teachers are recommended to undertake this type of studies for selecting and planning the training programmes for the players.

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